

1 IN THE CLAIMS

2 1. (previously amended) A wave reducing hull for a vessel having a bow, midbody and
3 a stern; said hull being characterized in having:
4 (a) a generally triangular waterplane having a pointed end adjacent said bow, and a maximum
5 water beam adjacent said stern;
6 (b) said waterplane having a generally rectilinear diverging sides extending substantially from
7 said pointed end to said maximum water beam;
8 (c) said waterplane having a midbody water beam substantially smaller than said maximum
9 water beam;
10 (d) said hull having a draft adjacent said pointed end deeper than the draft adjacent said
11 maximum water beam; and
12 (e) said draft adjacent said pointed end being no greater than approximately thirty three percent
13 (33%) of said maximum water beam adjacent said stern..

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15 2. (original) The ship hull of claim 1 wherein said bow portion of said hull is generally free
16 of depending structures.

- 17 3. (canceled)
18 4. (canceled)
19 5. (canceled)
20 6. (canceled)
21 7. (canceled)
22 8. (canceled)
23 9. (canceled)
24 10. (canceled)
25 11. (canceled)
26 12. (canceled)

27 13. (previously amended) A transonic hull with a displacement body portion below

1 waterplane having in hydrostatic conditions a length, a bow, a midbody portion, a stern, and a
2 generally triangular waterplane with an apex adjacent said bow, a wide waterplane beam adjacent
3 said stern and a waterplane beam adjacent said midbody portion substantially smaller than said wide
4 waterplane beam, said body portion having a first draft adjacent said bow substantially greater than
5 a second draft adjacent said wide waterplane beam; said body portion being further characterized in
6 having three principal longitudinal surface components, two of which form principal right and left
7 side surface elements of said body portion, with the third principle longitudinal surface component
8 forming a principal bottom surface element of said body portion.

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10 14. (original) The structure of claim 13 in which said submerged body portion has a
11 longitudinal axis at its waterplane, with athwarship crosssections perpendicular to said longitudinal
12 axis, and with the projection of said crosssections in end view forming a single peripheral envelope
13 of said crosssections with generally flat sides.

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15 15. (previously amended) A transonic hull with a displacement body portion below
16 waterplane having in hydrostatic condition a length, a bow, a midbody portion, a stern, and a
17 generally triangular waterplane with a longitudinal axis, with a sharp end adjacent said bow, a wide
18 waterplane beam adjacent said stern and a waterplane beam adjacent said midbody portion
19 substantially smaller than said wide waterplane beam, said body portion having a first draft adjacent
20 said bow substantially greater than a second draft adjacent said wide waterplane beam, said body
21 portion being further characterized in that the lateral edges of said waterplane adjacent and meeting
22 at said apex are substantially rectilinear, and in that the angle included between each of said lateral
23 edges and said longitudinal axis is an acute angle of approximately 7°.

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25 16. (original) The structure of claim 15 further characterized in that the flow exit angle in
26 side view established between a rearward undersurface portion adjacent said stern and a line parallel
27 to waterplane intercepting the lower corner of said stern, being no greater than approximately the

1 angle between said lateral edges adjacent said apex.

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3 17. (original) The structure of claim 16 further characterized in that said flow exit angle is

4 approximately 60% of the angle between said lateral edges adjacent said apex.

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6 18. (previously amended) A Transonic Hull having a submerged portion with a bow, a

7 midbody portion, a stern and a length, with power means to move said hull in the water from a first

8 stationary hydrostatic displacement condition to a second subcritical speed displacement regime and

9 to a third faster super critical speed displacement regime, said submerged portion being further

10 characterized in having:

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12 (a) a generally triangular waterplane with a sharp end adjacent said bow, a wide waterplane

13 beam adjacent said stern and a waterplane beam adjacent said midbody portion substantially

14 smaller than said wide waterplane beam,

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16 (b) a profile with a deeper draft adjacent said bow, the submerged part of said bow being

17 generally free of depending structures, and a smaller draft adjacent said wide waterplane

18 beam,

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20 (c) and with the draft of said stern varying from approximately 4% of said base relative to

21 a static waterplane in said hydrostatic condition, to substantially zero relative to the water

22 surface adjacent and downstream of said stern when in said subcritical and super critical

23 regimes.

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25 19. (canceled).

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27 20. (canceled).

21. (previously amended) A wave reducing hull for a vessel comprising:

a generally triangular hull having a pointed narrow bow portion, a midbody portion, and a stern portion having a beam wider than the width of said midbody portion;

said hull having generally rectilinear diverging sides extending substantially from said bow to said stern;

said hull further characterized in having (a) a generally triangular waterplane in static conditions with a narrow end forward, a rear water beam adjacent said stern portion, and a longitudinal waterline length there between; (b) a center of gravity location no less than approximately 38.5% of said longitudinal waterline length measured forward of said rear water beam; (c) power means to propel said vessel to a speed to length ratio no less than approximately 1.25 with said speed expressed in knots and said length defined as the square root of said longitudinal water length expressed in feet;

said hull having in said static condition a draft adjacent said bow deeper than the static draft adjacent
the rear water beam; and

said draft adjacent said rear water beam being between approximately one percent (1%) and approximately four and one-half percent (4.5%) of said beam.